

CLAIMS

1. A composition comprising at least one peptide selected from the group consisting of SEQ ID NOS:2, 4, 6, 8, 10, 12, 14, and 16, wherein said peptide binds to a transforming growth factor.

2. The composition of Claim 1, wherein said peptide is encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, and 15.

3. The composition of Claim 1, wherein said peptide is expressed in a protease resistant scaffold.

4. The composition of Claim 3, wherein said scaffold is a protease inhibitor.

5. The composition of Claim 4, wherein said protease inhibitor is selected from the group consisting of Bowman-Birk Inhibitor, soybean trypsin inhibitor, and Eglin chymotrypsin inhibitor.

6. The composition of Claim 3, wherein said protease resistant scaffold and said peptide comprise a fusion protein.

7. A cosmetic or pharmaceutical composition comprising said at least one peptide of Claim 1.

8. The composition of Claim 7, wherein said composition is capable of modulating hair growth.

9. The composition of Claim 6, wherein said composition further comprises a scaffold.

10. A method for modulating hair growth comprising:

- i) providing a composition comprising a peptide contained within a scaffold;
- ii) providing a subject to be treated; and
- iii) applying said composition to said subject in an area in which hair growth modulation is desired.

11. The method of Claim 10, wherein said peptide binds to a transforming growth factor-beta (TGF β).

12. The method of Claim 11, wherein said TGF β is selected from the group consisting of TGF β -1 and TGF β -2.

13. The method of Claim 10, wherein said scaffold is selected from the group consisting of Bowman-Birk inhibitor, soybean trypsin inhibitor, and Eglin chymotrypsin inhibitor.

14. The method of Claim 10, wherein said peptide is selected from the group consisting of SEQ ID NOS: 2, 4, 6, 8, 10, 12, 14, and 16.

15. The method of Claim 10, wherein said peptide is encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NOS:1, 3, 5, 7, 9, 11, 13, and 15.

16. A method for decreasing the activity of a transforming growth factor comprising the steps of:

- i) providing a subject; and
- ii) administering the composition of Claim 1 to said subject, under conditions such that the activity of said transforming growth factor is decreased.

17. The method of Claim 16, wherein said transforming growth factor is selected from the group consisting of TGF β -1 and TGF β -2.

18. A composition comprising at least one TGF β -1 peptide sequence selected from the group of SEQ ID NOS:2, 4, 6, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, and 34.

19. A composition comprising at least one TGF β -2 peptide sequence selected from the group of SEQ ID NOS:8, 10, 12, 14, and 16.